(1) 10000 $cm^3/m^2/min.$ (0.25 gpm/$ft.^2$) over each horizontal surface; and

(2) 4000 $cm^3/m^2/min.$ (0.10 gpm/$ft.^2$) against vertical surface, including the water rundown.

(b) The water spray protection under §154.1110 (d) and (e) must cover an area in a horizontal plane extending at least 0.5 m (19 in.) in each direction from the pipes, fittings, and valves, or the area of the drip tray, whichever is greater.

§154.1120 Nozzles.

(a) Nozzles for the water spray system must be spaced to provide the minimum discharge density under §154.1115 in each part of the protected area.

(b) The vertical distance between water spray nozzles for the protection of vertical surfaces must be 3.7 m (12 ft.) or less.

§154.1125 Pipes, fittings, and valves.

(a) Each pipe, fitting, and valve for each water spray system must meet Part 56 of this chapter.

(b) Each water spray main that protects more than one area listed in §154.1110 must have at least one isolation valve at each branch connection and at least one isolation valve downstream of each branch connection to isolate damaged sections.

(c) Each valved cross-connection from the water spray system to the fire main must be outside of the cargo area.

(d) Each pipe, fitting, and valve for the water spray system must be made of fire resistant and corrosion resistant materials, such as galvanized steel or galvanized iron pipe.

(e) Each water spray system must have a means of drainage to prevent corrosion of the system and freezing of accumulated water in subfreezing temperatures.

(f) Each water spray system must have a dirt strainer that is located at the water spray system manifold or pump.

§154.1130 Sections.

(a) If a water spray system is divided into sections, each section must at least include the entire deck area bounded by the length of a cargo tank and the full beam of the vessel.

(b) If a water spray system is divided into sections, the control valves must be at a single manifold that is aft of the cargo area.

§154.1135 Pumps.

(a) Water to the water spray system must be supplied by:

(1) A pump that is only for the use of the system;

(2) A fire pump; or

(3) A pump specially approved by the Commandant (CG–OES).

(b) Operation of a water spray system must not interfere with simultaneous operation of the fire main system at its required capacity. There must be a valved cross-connection between the two systems.

(c) Except as allowed under paragraph (d) of this section, each pump for each water spray system must have the capacity to simultaneously supply all areas named in §154.1110.

(d) If the water spray system is divided into sections, the pump under paragraph (a) of this section must have the capacity to simultaneously supply the required discharge density under §154.1115(a) for:

(1) The areas in §§154.1110(f) through (h) and 154.1115(b); and

(2) The largest section that includes the required protection under §154.1110 (a), (b), and (c).

[CGD 74–289, 44 FR 26009, May 3, 1979, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

FIREFIGHTING SYSTEM: DRY CHEMICAL

§154.1140 Dry chemical system: General.

Each liquefied flammable gas carrier must have a dry chemical firefighting system that meets §§154.1145 through 154.1170, Part 56 and Subpart 162.039 of this chapter.

§154.1145 Dry chemical supply.

(a) A vessel with a cargo carrying capacity less that 1000 m^3 (35,300 $ft.^3$) must have at least one self-contained dry chemical storage unit for the cargo area with an independent inert gas pressurizing source adjacent to each unit.

(b) A vessel with a cargo carrying capacity of 1000 m^3 (35,300 $ft.^3$) or more must have at least two self-contained dry chemical storage units for the